

Search Plan and Results

Question

[What is the relationship between the intake of milk and milk products and bone health? \(DGAC 2010\)](#)

[What is the relationship between the intake of milk and milk products and cardiovascular disease? \(DGAC 2010\)](#)

[What is the relationship between the intake of milk and milk products and blood pressure? \(DGAC 2010\)](#)

[What is the relationship between the intake of milk and milk products and type 2 diabetes? \(DGAC 2010\)](#)

[What is the relationship between the intake of milk and milk products and metabolic syndrome? \(DGAC 2010\)](#)

[What is the relationship between the intake of milk and milk products and serum cholesterol? \(DGAC 2010\)](#)

Date Searched

7/29/09

Inclusion Criteria

- June 2004 to July 2009
- Human subjects
- English language
- International
- *Sample size*: Minimum of 10 subjects per study arm; preference for larger sizes, if available
- *Dropout rate*: Less than 20%; preference for smaller dropout rates
- *Ages*: Children, two to 18 years; adults, 19 years and older
- *Populations*: Healthy and those with elevated chronic disease risk.

Exclusion Criteria

- Studies that only consider cancer outcomes
- Studies that considered milk and milk products as part of a larger dietary pattern
- Milk and milk products in forms not commonly consumed (e.g., enriched with additional calcium)
- Medical treatment or therapy
- Diseased subjects (already diagnosed with disease related to study purpose)
- Hospitalized patients

- Animal studies
- In vitro studies
- Articles not peer reviewed (web sites, magazine articles, Federal reports, etc.).

Search Terms: Search Vocabulary

("Dairy Products"[mh]) AND ("Diabetes Mellitus, Type 2"[mh] OR "metabolic syndrome X"[mh] OR "hypertension"[mh] OR "dyslipidemias"[mh] OR "cardiovascular diseases"[mesh: NoExp] OR "heart diseases"[mh] OR "chronic disease"[mh] OR "Neoplasms"[majr] OR osteoporosis[mh] OR "Bone Density"[Mesh] OR "Fractures, Bone"[Mesh])

Electronic Databases

PubMed.

Total hits from all electronic database searches: 223

Total articles identified to review from electronic databases: 95

Articles Identified Via Handsearch or Other Means

Hand Search (Three Articles)

Al-Zahrani MS. [Increased intake of dairy products is related to lower periodontitis prevalence.](#) *J Periodontol.* 2006 Feb; 77(2): 289-294. PMID: 16460256. (Hand search)

Beydoun MA, Gary TL, Caballero BH, Lawrence RS, Cheskin LJ, Wang Y. [Ethnic differences in dairy and related nutrient consumption among US adults and their association with obesity, central obesity, and the metabolic syndrome.](#) *Am J Clin Nutr.* 2008 Jun; 87(6): 1, 914-1, 925. PMID: 18541585; PMCID: PMC2585752. (Hand search)

Bowen J, Noakes M, Clifton PM. [Effect of calcium and dairy foods in high protein, energy-restricted diets on weight loss and metabolic parameters in overweight adults.](#) *Int J Obes (Lond).* 2005 Aug; 29(8): 957-965. PMID: 15711601. (Hand search)

Summary of Articles Identified to Review

Number of Primary Articles Identified: 20

Number of Review Articles Identified: 4

Total Number of Articles Identified: 24

Number of Articles Reviewed but Excluded: 74

List of Articles Included for Evidence Analysis

What is the relationship between the intake of milk and milk products and bone health?

Systematic Reviews/Meta-analyses

Alvarez-León EE, Román-Viñas B, Serra-Majem L. [Dairy products and health: A review of the epidemiological evidence](#). *Br J Nutr*. 2006 Aug; 96 Suppl 1: S94-S99. Review. PMID: 16923261.

Huncharek M, Muscat J, Kupelnick B. [Impact of dairy products and dietary calcium on bone-mineral content in children: Results of a meta-analysis](#). *Bone*. 2008 Aug; 43(2): 312-321. Epub 2008 Mar 15. PMID: 18539555.

Kanis JA, Johansson H, Oden A, De Laet C, Johnell O, Eisman JA, Mc Closkey E, Mellstrom D, Pols H, Reeve J, Silman A, Tenenhouse A. [A meta-analysis of milk intake and fracture risk: low utility for case finding](#). *Osteoporos Int*. 2005 Jul; 16(7): 799-804. Epub 2004 Oct 21. PMID: 15502959.

Primary Research

Trials

Budek AZ, Hoppe C, Michaelsen KF, Mølgaard C. [High intake of milk, but not meat, decreases bone turnover in prepubertal boys after 7 days](#). *Eur J Clin Nutr*. 2007 Aug; 61(8): 957-962. Epub 2007 Jan 17. PMID: 17228345.

Kristensen M, Jensen M, Kudsk J, Henriksen M, Mølgaard C. [Short-term effects on bone turnover of replacing milk with cola beverages: A 10-day interventional study in young men](#). *Osteoporos Int*. 2005 Dec; 16(12): 1, 803-1, 808. Epub 2005 May 11. PMID: 15886860.

McCabe LD, Martin BR, McCabe GP, Johnston CC, Weaver CM, Peacock M. [Dairy intakes affect bone density in the elderly](#). *Am J Clin Nutr*. 2004 Oct; 80(4): 1, 066-1, 074. PMID: 15447921.

Longitudinal Study

Rockell JE, Williams SM, Taylor RW, Grant AM, Jones IE, Goulding A. [Two-year changes in bone and body composition in young children with a history of prolonged milk avoidance](#). *Osteoporos Int*. 2005 Sep; 16(9): 1, 016-1, 023. Epub 2004 Nov 23. PMID: 15565350.

Case-Control Study

Konstantynowicz J, Nguyen TV, Kaczmarek M, Jamiolkowski J, Piotrowska-Jastrzebska J, Seeman E. [Fractures during growth: Potential role of a milk-free diet](#). *Osteoporos Int*. 2007 Dec; 18(12): 1, 601-1, 607. Epub 2007 May 22. PMID: 17516020.

Cross-Sectional Study

Al-Zahrani MS. [Increased intake of dairy products is related to lower periodontitis prevalence.](#) *J Periodontol.* 2006 Feb; 77(2): 289-294. PMID: 16460256. (Hand search)

What is the relationship between the intake of milk and milk products and cardiovascular disease?

Systematic Reviews/Meta-Analyses

Alvarez-León EE, Román-Viñas B, Serra-Majem L. [Dairy products and health: A review of the epidemiological evidence.](#) *Br J Nutr.* 2006 Aug; 96 Suppl 1: S94-S99. Review. PMID: 16923261.

Elwood PC, Givens DI, Beswick AD, Fehily AM, Pickering JE, Gallacher J. [The survival advantage of milk and dairy consumption: An overview of evidence from cohort studies of vascular diseases, diabetes and cancer.](#) *J Am Coll Nutr.* 2008 Dec; 27(6): 723S-734S. PMID: 19155432.

Primary Research

Case-Control Study

Kontogianni MD, Panagiotakos DB, Chrysohoou C, Pitsavos C, Stefanadis C. [Modelling dairy intake on the development of acute coronary syndromes: The CARDIO2000 study.](#) *Eur J Cardiovasc Prev Rehabil.* 2006 Oct; 13(5): 791-797. PMID: 17001220.

What is the relationship between the intake of milk and milk products and blood pressure?

Systematic Review

Alvarez-León EE, Román-Viñas B, Serra-Majem L. [Dairy products and health: a review of the epidemiological evidence.](#) *Br J Nutr.* 2006 Aug; 96 Suppl 1: S94-S99. Review. PMID: 16923261.

Primary Research

Trial

Bowen J, Noakes M, Clifton PM. [Effect of calcium and dairy foods in high protein, energy-restricted diets on weight loss and metabolic parameters in overweight adults.](#) *Int J Obes (Lond).* 2005 Aug; 29(8): 957-965. PMID: 15711601. (Hand search)

Prospective Cohort Studies

Alonso A, Beunza JJ, Delgado-Rodríguez M, Martínez JA, Martínez-González MA. [Low-fat dairy consumption and reduced risk of hypertension: The Seguimiento Universidad de Navarra \(SUN\) cohort.](#) *Am J Clin Nutr.* 2005 Nov; 82(5): 972-979. PMID: 16280427.

Engberink MF, Hendriksen MA, Schouten EG, van Rooij FJ, Hofman A, Witteman JC, Geleijnse JM. [Inverse association between dairy intake and hypertension: The Rotterdam Study.](#) *Am J Clin Nutr.* 2009 Jun; 89(6): 1, 877-1, 883. Epub 2009 Apr 15. PMID: 19369377.

Engberink MF, Geleijnse JM, de Jong N, Smit HA, Kok FJ, Verschuren WM. [Dairy intake, blood pressure, and incident hypertension in a general Dutch population.](#) *J Nutr.* 2009 Mar; 139(3): 582-587. Epub 2009 Jan 21. PMID: 19158223.

Snijder MB, van Dam RM, Stehouwer CD, Hiddink GJ, Heine RJ, Dekker JM. [A prospective study of dairy consumption in relation to changes in metabolic risk factors: The Hoorn Study](#). *Obesity (Silver Spring)*. 2008 Mar; 16(3): 706-709. Epub 2008 Jan 17. PMID: 18239556.

Toledo E, Delgado-Rodríguez M, Estruch R, Salas-Salvadó J, Corella D, Gomez-Gracia E, Fiol M, Lamuela-Raventós RM, Schröder H, Arós F, Ros E, Ruíz-Gutiérrez V, Lapetra J, Conde-Herrera M, Sáez G, Vinyoles E, Martínez-González MA. [Low-fat dairy products and blood pressure: Follow-up of 2290 older persons at high cardiovascular risk participating in the PREDIMED study](#). *Br J Nutr*. 2009 Jan; 101(1): 59-67. Epub 2008 May 20. PMID: 18492300.

Wang L, Manson JE, Buring JE, Lee IM, Sesso HD. [Dietary intake of dairy products, calcium, and vitamin D and the risk of hypertension in middle-aged and older women](#). *Hypertension*. 2008 Apr; 51(4): 1, 073-1, 079. Epub 2008 Feb 7. PMID: 18259007.

Cross-Sectional Studies

Azadbakht L, Mirmiran P, Esmailzadeh A, Azizi F. [Dairy consumption is inversely associated with the prevalence of the metabolic syndrome in Tehranian adults](#). *Am J Clin Nutr*. 2005 Sep; 82(3): 523-530. PMID: 16155263.

Beydoun MA, Gary TL, Caballero BH, Lawrence RS, Cheskin LJ, Wang Y. [Ethnic differences in dairy and related nutrient consumption among US adults and their association with obesity, central obesity, and the metabolic syndrome](#). *Am J Clin Nutr*. 2008 Jun; 87(6): 1, 914-1, 925. PMID: 18541585; PMCID: PMC2585752. (Hand search)

Djoussé L, Pankow JS, Hunt SC, Heiss G, Province MA, Kabagambe EK, Ellison RC. [Influence of saturated fat and linolenic acid on the association between intake of dairy products and blood pressure](#). *Hypertension*. 2006 Aug; 48(2): 335-341. Epub 2006 Jun 26. PMID: 16801477.

Houston DK, Driver KE, Bush AJ, Kritchevsky SB. [The association between cheese consumption and cardiovascular risk factors among adults](#). *J Hum Nutr Diet*. 2008 Apr; 21(2): 129-140. PMID: 18339053.

Ruidavets JB, Bongard V, Simon C, Dallongeville J, Ducimetière P, Arveiler D, Amouyel P, Bingham A, Ferrières J. [Independent contribution of dairy products and calcium intake to blood pressure variations at a population level](#). *J Hypertens*. 2006 Apr; 24(4): 671-681. PMID: 16531795.

What is the relationship between the intake of milk and milk products and type 2 diabetes?

Meta-Analysis

Elwood PC, Givens DI, Beswick AD, Fehily AM, Pickering JE, Gallacher J. [The survival advantage of milk and dairy consumption: An overview of evidence from cohort studies of vascular diseases, diabetes and cancer](#). *J Am Coll Nutr*. 2008 Dec; 27(6): 723S-734S. PMID: 19155432.

What is the relationship between the intake of milk and milk products and metabolic syndrome?

Primary Research

Meta-Analysis

Elwood PC, Givens DI, Beswick AD, Fehily AM, Pickering JE, Gallacher J. [The survival advantage of milk and dairy consumption: An overview of evidence from cohort studies of vascular diseases, diabetes and cancer.](#) *J Am Coll Nutr.* 2008 Dec; 27(6): 723S-734S. PMID: 19155432.

Prospective Cohort Study

Snijder MB, van Dam RM, Stehouwer CD, Hiddink GJ, Heine RJ, Dekker JM. [A prospective study of dairy consumption in relation to changes in metabolic risk factors: The Hoorn Study.](#) *Obesity (Silver Spring).* 2008 Mar; 16(3): 706-709. Epub 2008 Jan 17. PMID: 18239556.

Cross-Sectional Studies

Beydoun MA, Gary TL, Caballero BH, Lawrence RS, Cheskin LJ, Wang Y. [Ethnic differences in dairy and related nutrient consumption among US adults and their association with obesity, central obesity, and the metabolic syndrome.](#) *Am J Clin Nutr.* 2008 Jun; 87(6): 1, 914-1, 925. PMID: 18541585; PMCID: PMC2585752. (Hand search)

Ruidavets JB, Bongard V, Dallongeville J, Arveiler D, Ducimetière P, Perret B, Simon C, Amouyel P, Ferrières J. [High consumptions of grain, fish, dairy products and combinations of these are associated with a low prevalence of metabolic syndrome.](#) *J Epidemiol Community Health.* 2007 Sep; 61(9): 810-817. PMID: 17699537.

What is the relationship between the intake of milk and milk products and serum cholesterol?

Primary Research

Trial

Bowen J, Noakes M, Clifton PM. [Effect of calcium and dairy foods in high protein, energy-restricted diets on weight loss and metabolic parameters in overweight adults.](#) *Int J Obes (Lond).* 2005 Aug; 29(8): 957-965. PMID: 15711601. (Hand search)

Prospective Cohort Study

Snijder MB, van Dam RM, Stehouwer CD, Hiddink GJ, Heine RJ, Dekker JM. [A prospective study of dairy consumption in relation to changes in metabolic risk factors: The Hoorn Study.](#) *Obesity (Silver Spring).* 2008 Mar; 16(3): 706-709. Epub 2008 Jan 17. PMID: 18239556.

Cross-Sectional Study

Houston DK, Driver KE, Bush AJ, Kritchevsky SB. [The association between cheese consumption and cardiovascular risk factors among adults.](#) *J Hum Nutr Diet.* 2008 Apr; 21(2): 129-140. PMID: 18339053.

List of Excluded Articles with Reason

Article (A–J)	Reason for Exclusion
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<p>Ahn J, Albanes D, Peters U, Schatzkin A, Lim U, Freedman M, Chatterjee N, Andriole GL, Leitzmann MF, Hayes RB; Prostate, Lung, Colorectal, and Ovarian Trial Project Team. Dairy products, calcium intake, and risk of prostate cancer in the prostate, lung, colorectal, and ovarian cancer screening trial. <i>Cancer Epidemiol Biomarkers Prev</i>. 2007 Dec; 16(12): 2, 623-2, 630. PMID: 18086766.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Al Sarakbi W, Salhab M, Mokbel K. Dairy products and breast cancer risk: A review of the literature. <i>Int J Fertil Womens Med</i>. 2005 Nov-Dec; 50(6): 244-249. Review. PMID: 16526414.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Allen NE, Key TJ, Appleby PN, Travis RC, Roddam AW, Tjønneland A, Johnsen NF, Overvad K, Linseisen J, Rohrmann S, Boeing H, Pischon T, Bueno-de-Mesquita HB, Kiemeny L, Tagliabue G, Palli D, Vineis P, Tumino R, Trichopoulou A, Kassapa C, Trichopoulos D, Ardanaz E, Larrañaga N, Tormo MJ, González CA, Quirós JR, Sánchez MJ, Bingham S, Khaw KT, Manjer J, Berglund G, Stattin P, Hallmans G, Slimani N, Ferrari P, Rinaldi S, Riboli E. Animal foods, protein, calcium and prostate cancer risk: the European Prospective Investigation into Cancer and Nutrition. <i>Br J Cancer</i>. 2008 May 6; 98(9): 1, 574-1, 581. Epub 2008 Apr 1. PMID: 18382426.</p>	<p>Does not answer question: examined relationship between milk protein intake and health.</p>
<p>Azadbakht L, Mirmiran P, Esmailzadeh A, Azizi F. Dairy consumption is inversely associated with the prevalence of the metabolic syndrome in Tehranian adults. <i>Am J Clin Nutr</i>. 2005 Sep; 82(3): 523-530. PMID: 16155263.</p>	<p>Included in blood pressure review, but excluded from metabolic syndrome review because included in Elwood, 2008.</p>
<p>Bandera EV, Kushi LH, Moore DF, Gifkins DM, McCullough ML. Consumption of animal foods and endometrial cancer risk: A systematic literature review and meta-analysis. <i>Cancer Causes Control</i>. 2007 Nov; 18(9): 967-988. Epub 2007 Jul 19. Review. PMID: 17638104; PMCID: PMC2592095.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Benito P, Caballero J, Moreno J, Gutiérrez-Alcántara C, Muñoz C, Rojo G, Garcia S, Soriguer FC. Effects of milk enriched with omega-3 fatty acid, oleic acid and folic acid in patients with metabolic syndrome. <i>Clin Nutr</i>. 2006 Aug; 25(4): 581-587. Epub 2006 May 15. PMID: 16701922.</p>	<p>Participants diagnosed with metabolic syndrome.</p>

<p>Biong AS, Rebnord HM, Fimreite RL, Trygg KU, Ringstad J, Thelle DS, Pedersen JI. Intake of dairy fat and dairy products, and risk of myocardial infarction: A case-control study. <i>Int J Food Sci Nutr</i>. 2008 Mar; 59(2): 155-165. PMID: 17886080.</p>	<p>Included in Elwood, 2008.</p>
<p>Biong AS, Veierød MB, Ringstad J, Thelle DS, Pedersen JI. Intake of milk fat, reflected in adipose tissue fatty acids and risk of myocardial infarction: A case-control study. <i>Eur J Clin Nutr</i>. 2006 Feb; 60(2): 236-244. PMID: 16267503.</p>	<p>Does not answer question: examined relationship between fatty acids in adipose tissue and myocardial infarction.</p>
<p>Chan JM, Wang F, Holly EA. Pancreatic cancer, animal protein and dietary fat in a population-based study, San Francisco Bay Area, California. <i>Cancer Causes Control</i>. 2007 Dec; 18(10): 1, 153-1, 167. Epub 2007 Sep 1. PMID: 17805983.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Cheng S, Lyytikäinen A, Kröger H, Lamberg-Allardt C, Alén M, Koistinen A, Wang QJ, Suuriniemi M, Suominen H, Mahonen A, Nicholson PH, Ivaska KK, Korpela R, Ohlsson C, Väänänen KH, Tylavsky F. Effects of calcium, dairy product, and vitamin D supplementation on bone mass accrual and body composition in 10- to 12-year-old girls: A two-year randomized trial. <i>Am J Clin Nutr</i>. 2005 Nov; 82(5): 1, 115-1, 126; quiz 1, 147-1, 148. PMID: 16280447.</p>	<p>Included in Huncharek, 2008.</p>
<p>Cho E, Smith-Warner SA, Spiegelman D, Beeson WL, van den Brandt PA, Colditz GA, Folsom AR, Fraser GE, Freudenheim JL, Giovannucci E, Goldbohm RA, Graham S, Miller AB, Pietinen P, Potter JD, Rohan TE, Terry P, Toniolo P, Virtanen MJ, Willett WC, Wolk A, Wu K, Yaun SS, Zeleniuch-Jacquotte A, Hunter DJ. Dairy foods, calcium, and colorectal cancer: a pooled analysis of 10 cohort studies. <i>J Natl Cancer Inst</i>. 2004 Jul 7; 96(13): 1, 015-1.022. Erratum in: <i>J Natl Cancer Inst</i>. 2004 Nov 17; 96(22): 1, 724. PMID: 15240785.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Choi HK, Willett WC, Stampfer MJ, Rimm E, Hu FB. Dairy consumption and risk of type 2 diabetes mellitus in men: a prospective study. <i>Arch Intern Med</i>. 2005 May 9; 165(9): 997-1, 003. PMID: 15883237.</p>	<p>Included in Elwood, 2008.</p>
<p>Daly RM, Bass S, Nowson C. Long-term effects of calcium-vitamin-D3-fortified milk on bone geometry and strength in older men. <i>Bone</i>. 2006 Oct; 39(4): 946-953. Epub 2006 May 24. PMID: 16725396.</p>	<p>Milk enriched with additional calcium and vitamin D₃.</p>

<p>Daly RM, Brown M, Bass S, Kukuljan S, Nowson C. Calcium- and vitamin D3-fortified milk reduces bone loss at clinically relevant skeletal sites in older men: a 2-year randomized controlled trial. <i>J Bone Miner Res.</i> 2006 Mar; 21(3): 397-405. Epub 2005 Dec 19. PMID: 16491287.</p>	<p>Milk enriched with additional calcium and vitamin D₃.</p>
<p>Dixon LB, Pellizzon MA, Jawad AF, Tershakovec AM. Calcium and dairy intake and measures of obesity in hyper- and normocholesterolemic children. <i>Obes Res.</i> 2005 Oct; 13(10): 1, 727-1, 738. PMID: 16286520.</p>	<p>The relationship between milk product intake and adiposity in children is reviewed in the Energy Balance section.</p>
<p>Doornbos AM, Meynen EM, Duchateau GS, van der Knaap HC, Trautwein EA. Intake occasion affects the serum cholesterol lowering of a plant sterol-enriched single-dose yoghurt drink in mildly hypercholesterolaemic subjects. <i>Eur J Clin Nutr.</i> 2006 Mar; 60(3): 325-333. PMID: 16234829.</p>	<p>Participants diagnosed with hypercholesterolemia.</p>
<p>Du X, Zhu K, Trube A, Zhang Q, Ma G, Hu X, Fraser DR, Greenfield H. School-milk intervention trial enhances growth and bone mineral accretion in Chinese girls aged 10 to 12 years in Beijing. <i>Br J Nutr.</i> 2004 Jul; 92(1): 159-168. Erratum in: <i>Br J Nutr.</i> 2005 Apr; 93(4): 571-572. PMID: 15230999.</p>	<p>Milk enriched with additional calcium.</p>
<p>Elwood PC, Pickering JE, Fehily AM. Milk and dairy consumption, diabetes and the metabolic syndrome: The Caerphilly prospective study. <i>J Epidemiol Community Health.</i> 2007 Aug; 61(8): 695-698. PMID: 17630368.</p>	<p>Included in Elwood, 2008.</p>
<p>Elwood PC, Pickering JE, Fehily AM, Hughes J, Ness AR. Milk drinking, ischaemic heart disease and ischaemic stroke I. Evidence from the Caerphilly cohort. <i>Eur J Clin Nutr.</i> 2004 May; 58(5): 711-717. PMID: 15116073.</p>	<p>Included in Elwood, 2008.</p>
<p>Elwood PC, Pickering JE, Hughes J, Fehily AM, Ness AR. Milk drinking, ischaemic heart disease and ischaemic stroke II. Evidence from cohort studies. <i>Eur J Clin Nutr.</i> 2004 May; 58(5): 718-724. Review. PMID: 15116074.</p>	<p>The most recent meta-analyses from these authors on these outcomes was included (Elwood, 2008).</p>
<p>Elwood PC, Strain JJ, Robson PJ, Fehily AM, Hughes J, Pickering J, Ness A. Milk consumption, stroke, and heart attack risk: Evidence from the Caerphilly cohort of older men. <i>J Epidemiol Community Health.</i> 2005 Jun; 59(6): 502-505. PMID: 15911647; PMCID: PMC1757052.</p>	<p>Included in Elwood, 2008.</p>

<p>Fiorito LM, Mitchell DC, Smiciklas-Wright H, Birch LL. Dairy and dairy-related nutrient intake during middle childhood. <i>J Am Diet Assoc</i>. 2006 Apr; 106(4): 534-542. PMID: 16567149; PMCID: PMC2531148.</p>	<p>Does not answer question: did not examine relationship between milk product intake and health.</p>
<p>Gallus S, Bravi F, Talamini R, Negri E, Montella M, Ramazzotti V, Franceschi S, Giacosa A, La Vecchia C. Milk, dairy products and cancer risk (Italy). <i>Cancer Causes Control</i>. 2006 May; 17(4): 429-437. PMID: 16596295.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Gao X, LaValley MP, Tucker KL. Prospective studies of dairy product and calcium intakes and prostate cancer risk: a meta-analysis. <i>J Natl Cancer Inst</i>. 2005 Dec 7; 97(23): 1, 768-1, 777. Erratum in: <i>J Natl Cancer Inst</i>. 2006 Mar 1; 98(5): 366. PMID: 16333032.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Gardner CD, Messina M, Kiazand A, Morris JL, Franke AA. Effect of two types of soy milk and dairy milk on plasma lipids in hypercholesterolemic adults: A randomized trial. <i>J Am Coll Nutr</i>. 2007 Dec; 26(6): 669-677. PMID: 18187432.</p>	<p>Participants diagnosed with hypercholesterolemia.</p>
<p>Genkinger JM, Hunter DJ, Spiegelman D, Anderson KE, Arslan A, Beeson WL, Buring JE, Fraser GE, Freudenheim JL, Goldbohm RA, Hankinson SE, Jacobs DR Jr, Koushik A, Lacey JV Jr, Larsson SC, Leitzmann M, McCullough ML, Miller AB, Rodriguez C, Rohan TE, Schouten LJ, Shore R, Smit E, Wolk A, Zhang SM, Smith-Warner SA. Dairy products and ovarian cancer: A pooled analysis of 12 cohort studies. <i>Cancer Epidemiol Biomarkers Prev</i>. 2006 Feb; 15(2): 364-372. PMID: 16492930.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Gibbons MJ, Gilchrist NL, Frampton C, Maguire P, Reilly PH, March RL, Wall CR. The effects of a high calcium dairy food on bone health in pre-pubertal children in New Zealand. <i>Asia Pac J Clin Nutr</i>. 2004; 13(4): 341-347. PMID: 15563438.</p>	<p>Drink was a high calcium supplement, not milk as defined by the Subcommittee.</p>
<p>Hubner RA, Muir KR, Liu JF, Logan RF, Grainge MJ, Houlston RS; Members of UKCAP Consortium. Dairy products, polymorphisms in the vitamin D receptor gene and colorectal adenoma recurrence. <i>Int J Cancer</i>. 2008 Aug 1; 123(3): 586-593. PMID: 18470879.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Huncharek M, Muscat J, Kupelnick B. Colorectal cancer risk and dietary intake of calcium, vitamin D, and dairy products: A meta-analysis of 26, 335 cases from 60 observational studies. <i>Nutr Cancer</i>. 2009; 61(1): 47-69. PMID: 19116875.</p>	<p>Cancer outcomes excluded from NEL review.</p>

<p>Huncharek M, Muscat J, Kupelnick B. Dairy products, dietary calcium and vitamin D intake as risk factors for prostate cancer: A meta-analysis of 26, 769 cases from 45 observational studies. <i>Nutr Cancer</i>. 2008; 60(4): 421-441. PMID: 18584476.</p>	<p>Cancer outcomes excluded from NEL review.</p>
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Article (K–P)	Reason for Exclusion
<p>Kesse E, Bertrais S, Astorg P, Jaouen A, Arnault N, Galan P, Hercberg S. Dairy products, calcium and phosphorus intake, and the risk of prostate cancer: Results of the French prospective SU.VI.MAX (Supplémentation en Vitamines et Minéraux Antioxydants) study. <i>Br J Nutr</i>. 2006 Mar; 95(3): 539-545. PMID: 16512941.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Kesse E, Boutron-Ruault MC, Norat T, Riboli E, Clavel-Chapelon F; E3N Group. Dietary calcium, phosphorus, vitamin D, dairy products and the risk of colorectal adenoma and cancer among French women of the E3N-EPIC prospective study. <i>Int J Cancer</i>. 2005 Oct 20; 117(1): 137-144. PMID: 15880532.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Kesse-Guyot E, Bertrais S, Duperray B, Arnault N, Bar-Hen A, Galan P, Hercberg S. Dairy products, calcium and the risk of breast cancer: Results of the French SU.VI.MAX prospective study. <i>Ann Nutr Metab</i>. 2007; 51(2): 139-145. Epub 2007 May 29. PMID: 17536191.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Koh KA, Sesso HD, Paffenbarger RS Jr, Lee IM. Dairy products, calcium and prostate cancer risk. <i>Br J Cancer</i>. 2006 Dec 4; 95(11): 1, 582-1, 585. Epub 2006 Nov 14. PMID: 17106437.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Koralek DO, Bertone-Johnson ER, Leitzmann MF, Sturgeon SR, Lacey JV Jr, Schairer C, Schatzkin A. Relationship between calcium, lactose, vitamin D, and dairy products and ovarian cancer. <i>Nutr Cancer</i>. 2006; 56(1): 22-30. PMID: 17176214.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Korpela R, Tuomilehto J, Högström P, Seppo L, Piironen V, Salo-Väänänen P, Toivo J, Lamberg-Allardt C, Kärkkäinen M, Outila T, Sundvall J, Vilkkilä S, Tikkanen MJ. Safety aspects and cholesterol-lowering efficacy of low fat dairy products containing plant sterols. <i>Eur J Clin Nutr</i>. 2006 May; 60(5): 633-642. PMID: 16404415.</p>	<p>Dairy products contained plant sterols.</p>

<p>Kurahashi N, Inoue M, Iwasaki M, Sasazuki S, Tsugane AS; Japan Public Health Center-Based Prospective Study Group. Dairy product, saturated fatty acid, and calcium intake and prostate cancer in a prospective cohort of Japanese men. <i>Cancer Epidemiol Biomarkers Prev.</i> 2008 Apr; 17(4): 930-937. PMID: 18398033.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Kuriki K, Hirose K, Matsuo K, Wakai K, Ito H, Kanemitsu Y, Hirai T, Kato T, Hamajima N, Takezaki T, Suzuki T, Saito T, Tanaka R, Tajima K. Meat, milk, saturated fatty acids, the Pro12Ala and C161T polymorphisms of the PPARgamma gene and colorectal cancer risk in Japanese. <i>Cancer Sci.</i> 2006 Nov; 97(11): 1, 226-1, 235. Epub 2006 Sep 5. PMID: 16965392.</p>	<p>Does not answer question: examined risk related to genetic polymorphisms.</p>
<p>Lancaster KJ. Characteristics influencing daily consumption of fruits and vegetables and low-fat dairy products in older adults with hypertension. <i>J Nutr Elder.</i> 2004; 23(4): 21-33. PMID: 15233120.</p>	<p>Does not answer question; did not examine relationship between milk product intake and health; participants diagnosed with hypertension.</p>
<p>Larson NI, Neumark-Sztainer D, Harnack L, Wall M, Story M, Eisenberg ME. Calcium and dairy intake: Longitudinal trends during the transition to young adulthood and correlates of calcium intake. <i>J Nutr Educ Behav.</i> 2009 Jul-Aug; 41(4): 254-260. PMID: 19508930.</p>	<p>Does not answer question; did not examine relationship between milk product intake and health.</p>
<p>Larsson SC, Andersson SO, Johansson JE, Wolk A. Cultured milk, yogurt, and dairy intake in relation to bladder cancer risk in a prospective study of Swedish women and men. <i>Am J Clin Nutr.</i> 2008 Oct; 88(4): 1, 083-1, 087. PMID: 18842797.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Larsson SC, Bergkvist L, Rutegård J, Giovannucci E, Wolk A. Calcium and dairy food intakes are inversely associated with colorectal cancer risk in the Cohort of Swedish Men. <i>Am J Clin Nutr.</i> 2006 Mar; 83(3): 667-673; quiz 728-729. PMID: 16522915.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Larsson SC, Bergkvist L, Wolk A. High-fat dairy food and conjugated linoleic acid intakes in relation to colorectal cancer incidence in the Swedish Mammography Cohort. <i>Am J Clin Nutr.</i> 2005 Oct; 82(4): 894-900. PMID: 16210722.</p>	<p>Cancer outcomes excluded from NEL review.</p>

<p>Larsson SC, Bergkvist L, Wolk A. Milk and lactose intakes and ovarian cancer risk in the Swedish Mammography Cohort. <i>Am J Clin Nutr.</i> 2004 Nov; 80(5): 1, 353-1, 357. PMID: 15531686.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Larsson SC, Orsini N, Wolk A. Milk, milk products and lactose intake and ovarian cancer risk: A meta-analysis of epidemiological studies. <i>Int J Cancer.</i> 2006 Jan 15; 118(2): 431-441. PMID: 16052536.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Lawlor DA, Ebrahim S, Timpson N, Davey Smith G. Avoiding milk is associated with a reduced risk of insulin resistance and the metabolic syndrome: Findings from the British Women's Heart and Health Study. <i>Diabet Med.</i> 2005 Jun; 22(6): 808-811. PMID: 15910636.</p>	<p>Included in Elwood, 2008.</p>
<p>Liu S, Choi HK, Ford E, Song Y, Klevak A, Buring JE, Manson JE. A prospective study of dairy intake and the risk of type 2 diabetes in women. <i>Diabetes Care.</i> 2006 Jul; 29(7): 1, 579-1, 584. PMID: 16801582.</p>	<p>Included in Elwood, 2008.</p>
<p>Lorenz M, Jochmann N, von Krosigk A, Martus P, Baumann G, Stangl K, Stangl V. Addition of milk prevents vascular protective effects of tea. <i>Eur Heart J.</i> 2007 Jan; 28(2): 219-223. Epub 2007 Jan 9. PMID: 17213230.</p>	<p>Does not answer question; did not examine relationship between milk product intake and health.</p>
<p>Ma D, Jones G. Soft drink and milk consumption, physical activity, bone mass, and upper limb fractures in children: a population-based case-control study. <i>Calcif Tissue Int.</i> 2004 Oct; 75(4): 286-291. Epub 2004 Jul 30. PMID: 15549642.</p>	<p>Does not answer question; examines relationship between soft drink intake and fracture risk.</p>
<p>Matsumoto M, Ishikawa S, Nakamura Y, Kayaba K, Kajii E. Consumption of dairy products and cancer risks. <i>J Epidemiol.</i> 2007 Mar; 17(2): 38-44. PMID: 17420611.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>McCullough ML, Rodriguez C, Diver WR, Feigelson HS, Stevens VL, Thun MJ, Calle EE. Dairy, calcium, and vitamin D intake and postmenopausal breast cancer risk in the Cancer Prevention Study II Nutrition Cohort. <i>Cancer Epidemiol Biomarkers Prev.</i> 2005 Dec; 14(12): 2, 898-2, 904. PMID: 16365007.</p>	<p>Cancer outcomes excluded from NEL review.</p>

<p>McGlynn KA, Sakoda LC, Rubertone MV, Sesterhenn IA, Lyu C, Graubard BI, Erickson RL. Body size, dairy consumption, puberty, and risk of testicular germ cell tumors. <i>Am J Epidemiol.</i> 2007 Feb 15; 165(4): 355-363. Epub 2006 Nov 16. PMID: 17110638.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Mitrou PN, Albanes D, Weinstein SJ, Pietinen P, Taylor PR, Virtamo J, Leitzmann MF. A prospective study of dietary calcium, dairy products and prostate cancer risk (Finland). <i>Int J Cancer.</i> 2007 Jun 1; 120(11): 2, 466-2, 473. PMID: 17278090.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Mizoue T, Kimura Y, Toyomura K, Nagano J, Kono S, Mibu R, Tanaka M, Kakeji Y, Maehara Y, Okamura T, Ikejiri K, Futami K, Yasunami Y, Maekawa T, Takenaka K, Ichimiya H, Imaizumi N. Calcium, dairy foods, vitamin D, and colorectal cancer risk: The Fukuoka Colorectal Cancer Study. <i>Cancer Epidemiol Biomarkers Prev.</i> 2008 Oct; 17(10): 2, 800-2, 807. PMID: 18843026.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Mommers M, Schouten LJ, Goldbohm RA, van den Brandt PA. Dairy consumption and ovarian cancer risk in the Netherlands Cohort Study on Diet and Cancer. <i>Br J Cancer.</i> 2006 Jan 16; 94(1): 165-170. PMID: 16306872.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Nestel PJ, Chronopoulos A, Cehun M. Dairy fat in cheese raises LDL cholesterol less than that in butter in mildly hypercholesterolaemic subjects. <i>Eur J Clin Nutr.</i> 2005 Sep; 59(9): 1, 059-1, 063. PMID: 16015270.</p>	<p>Participants diagnosed with hypercholesterolemia.</p>
<p>Park SY, Murphy SP, Wilkens LR, Stram DO, Henderson BE, Kolonel LN. Calcium, vitamin D, and dairy product intake and prostate cancer risk: The Multiethnic Cohort Study. <i>Am J Epidemiol.</i> 2007 Dec 1; 166(11): 1, 259-1, 269. Epub 2007 Oct 8. PMID: 17925283.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Park Y, Leitzmann MF, Subar AF, Hollenbeck A, Schatzkin A. Dairy food, calcium, and risk of cancer in the NIH-AARP Diet and Health Study. <i>Arch Intern Med.</i> 2009 Feb 23; 169(4): 391-401. PMID: 19237724.</p>	<p>Cancer outcomes excluded from NEL review.</p>

<p>Park Y, Mitrou PN, Kipnis V, Hollenbeck A, Schatzkin A, Leitzmann MF. Calcium, dairy foods, and risk of incident and fatal prostate cancer: the NIH-AARP Diet and Health Study. <i>Am J Epidemiol</i>. 2007 Dec 1; 166(11): 1, 270-1, 279. Epub 2007 Oct 12. PMID: 18000020.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Parodi PW. Dairy product consumption and the risk of breast cancer. <i>J Am Coll Nutr</i>. 2005 Dec; 24(6 Suppl): 556S-568S. Review. PMID: 16373955.</p>	<p>Cancer outcomes excluded from NEL review.</p>

Article (Q–Z)	Reason for Exclusion
<p>Qin LQ, Xu JY, Wang PY, Hashi A, Hoshi K, Sato A. Milk/dairy products consumption, galactose metabolism and ovarian cancer: Meta-analysis of epidemiological studies. <i>Eur J Cancer Prev</i>. 2005 Feb; 14(1): 13-19. PMID: 15677891.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Qin LQ, Xu JY, Wang PY, Tong J, Hoshi K. Milk consumption is a risk factor for prostate cancer in Western countries: Evidence from cohort studies. <i>Asia Pac J Clin Nutr</i>. 2007; 16(3): 467-476. PMID: 17704029.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Qin LQ, Xu JY, Wang PY, Kaneko T, Hoshi K, Sato A. Milk consumption is a risk factor for prostate cancer: Meta-analysis of case-control studies. <i>Nutr Cancer</i>. 2004; 48(1): 22-27. PMID: 15203374.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Rohrmann S, Platz EA, Kavanaugh CJ, Thuita L, Hoffman SC, Helzlsouer KJ. Meat and dairy consumption and subsequent risk of prostate cancer in a US cohort study. <i>Cancer Causes Control</i>. 2007 Feb; 18(1): 41-50. PMID: 17315319.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Snijder MB, van der Heijden AA, van Dam RM, Stehouwer CD, Hiddink GJ, Nijpels G, Heine RJ, Bouter LM, Dekker JM. Is higher dairy consumption associated with lower body weight and fewer metabolic disturbances? The Hoorn Study. <i>Am J Clin Nutr</i>. 2007 Apr; 85(4): 989-995. PMID: 17413097.</p>	<p>Same data set as Snijder, 2008.</p>
<p>Sun Q, Ma J, Campos H, Hu FB. Plasma and erythrocyte biomarkers of dairy fat intake and risk of ischemic heart disease. <i>Am J Clin Nutr</i>. 2007 Oct; 86(4): 929-937. PMID: 17921367.</p>	<p>Does not answer question; examined relationship between fatty acids and disease risk.</p>
<p>Taguchi H, Chen H, Yano R, Shoumura S. Comparative effects of milk and soymilk on bone loss in adult ovariectomized osteoporosis rat. <i>Okajimas Folia Anat Jpn</i>. 2006 Aug; 83(2): 53-59. PMID: 16944838.</p>	<p>Study tested animals.</p>

<p>Tricon S, Burdge GC, Jones EL, Russell JJ, El-Khazen S, Moretti E, Hall WL, Gerry AB, Leake DS, Grimble RF, Williams CM, Calder PC, Yaqoob P. Effects of dairy products naturally enriched with cis-9, trans-11 conjugated linoleic acid on the blood lipid profile in healthy middle-aged men. <i>Am J Clin Nutr.</i> 2006 Apr; 83(4): 744-753. PMID: 16600923.</p>	<p>Milk products enriched with cis-9, trans-11 conjugated linoleic acid.</p>
<p>Tseng M, Breslow RA, Graubard BI, Ziegler RG. Dairy, calcium, and vitamin D intakes and prostate cancer risk in the National Health and Nutrition Examination Epidemiologic Follow-up Study cohort. <i>Am J Clin Nutr.</i> 2005 May; 81(5): 1, 147-1, 154. PMID: 15883441.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>van der Pols JC, Bain C, Gunnell D, Smith GD, Frobisher C, Martin RM. Childhood dairy intake and adult cancer risk: 65-year follow-up of the Boyd Orr cohort. <i>Am J Clin Nutr.</i> 2007 Dec; 86(6): 1, 722-1, 729. PMID: 18065592.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Vartanian LR, Schwartz MB, Brownell KD. Effects of soft drink consumption on nutrition and health: A systematic review and meta-analysis. <i>Am J Public Health.</i> 2007 Apr; 97(4): 667-675. Epub 2007 Feb 28. Review. PMID: 17329656; PMCID: PMC1829363.</p>	<p>Does not answer question; did not examine relationship between milk product intake and health.</p>
<p>Warensjö E, Jansson JH, Berglund L, Boman K, Ahrén B, Weinehall L, Lindahl B, Hallmans G, Vessby B. Estimated intake of milk fat is negatively associated with cardiovascular risk factors and does not increase the risk of a first acute myocardial infarction. A prospective case-control study. <i>Br J Nutr.</i> 2004 Apr; 91(4): 635-642. PMID: 15035691.</p>	<p>Does not include milk product intake in analyses.</p>
<p>Xu JY, Qin LQ, Wang PY, Li W, Chang C. Effect of milk tripeptides on blood pressure: a meta-analysis of randomized controlled trials. <i>Nutrition.</i> 2008 Oct; 24(10): 933-940. Epub 2008 Jun 17. PMID: 18562172.</p>	<p>Does not answer question; did not examine relationship between milk product intake and health.</p>
<p>Zhang J, Kesteloot H. Milk consumption in relation to incidence of prostate, breast, colon, and rectal cancers: Is there an independent effect? <i>Nutr Cancer.</i> 2005; 53(1): 65-72. PMID: 16351508.</p>	<p>Cancer outcomes excluded from NEL review.</p>
<p>Zhu K, Zhang Q, Foo LH, Trube A, Ma G, Hu X, Du X, Cowell CT, Fraser DR, Greenfield H. Growth, bone mass, and vitamin D status of Chinese adolescent girls three years after withdrawal of milk supplementation. <i>Am J Clin Nutr.</i> 2006 Mar; 83(3): 714-721. PMID: 16522922.</p>	<p>Milk enriched with additional calcium.</p>

